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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,681	04/12/2006	Beverly A. Piatt	13891US	4007

24116 7590 10/13/2010

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EXAMINER	
HOGAN, JAMES SEAN	
ART UNIT	**PAPER NUMBER**
3752	

MAIL DATE	DELIVERY MODE
10/13/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/541,681	PIATT ET AL.	
	Examiner	Art Unit	
	JAMES S. HOGAN	3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 August 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2,3 and 6-62* is/are pending in the application.

4a) Of the above claim(s) *21,27 and 29-62* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2,3,6-20,22-25 and 28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 2, 3, 6-10, 18-20 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,843,210 to Paranjpe et al.

3. As per claim 6 Paranjpe et al discloses a spray head (36) having at least one nozzle (74) configured to provide a charged aerosol from a liquid formulation, the nozzle comprising a manifold (80) having at least one fluid entrance (82) and one or more discrete fluid spray sites (from nozzles (74), said passage configured to branch out from the fluid entrance (82) to the spray sites (at (74), and into multiple fluidly decoupled paths such that upon travelling from the fluid entrance to any one of the spray sites, the liquid travels a substantially equal distance regardless of which nozzle path is taken, and where the spray sites are shown to be capable of being in arrays of differing geometric shapes and orientations based on the shown intended use within a duct (Col. 4, lines 6-7), and where the configuration would maintain equal flow of formulation to each spray site.

4. As per claim 2, the said fluid spray sites are arranged in a non-linear array,

5. As per claim 3, the spray head of Paranjpe et al further features a charged electrode (30) in communication with said fluid spray sites.

6. As per claim 7, the atomizing ends of the nozzles (74) of Paranjpe et al are aimed towards the common electrode (30), at equidistant and opposite ends.

7. As per claim 8, Paranjpe et al discloses the polarity of the electrodes and sprayer nozzles being referenced to one another, maintaining that they would be the same for spraying purposes (See Tables I and II, Col. 7)

8. As per claim 9, of Dvorsky et al discloses what could construe as spray shaping mechanisms being parallel counter electrodes, in the form of the nozzles and support conduits being grounded (See Figure 7)

9. As per claim 10, the "counter electrodes" as depicted in Figure 7 are the conduits themselves and qualify as being "thin rods" arranged in parallel and appear to "straddle" the spray sites, due their proximity to the nozzle tips.

10. As per claims 18-20, and 28, a "shroud" (12) is configured to direct charged aerosol (See Figure 2) and extends beyond the nozzles and shows evidence it would shield charged aerosol from environmental influences as well as preventing aerosol fro affecting areas around a targeted spray area.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. Claims 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,843,210 to Paranjpe et al

13. As per claims 13-17, Paranjpe et al has no information the material of the "shroud" (12) being a dielectric, however, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the shroud a dielectric, as common sense would dictate that a material having insulatory properties, given the nature of electrostatic spraying and further, the material possibly a polymeric, being transparent, opaque or pigmented is deemed to be obvious, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice and engineering logic.

14. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,843,210 to Paranjpe et al in view of U.S. Patent No 6,302,331 to Dvorsky et al in view

15. As per claim 11 and 12, Paranjpe et al is silent as to a moving electrode. As shown in previous actions, Dvorsky et al discloses moving electrodes in relation to the nozzles in order to create variations in spray shape (Col. 11, lines 36-54) and results in less material being used. it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the system of Paranjpe et al with the moving electrodes of Dvorsky et al in order to further shape a spray, found to be a common motivation by Dvorsky et al

16. Claims 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,843,210 to Paranjpe et al in view of U.S. Patent No. 4,962,885 to Coffee.

17. As per claim 22, Paranjpe et al is silent as to the addition of tines for use at the end of the shroud. Coffee teaches tines (15) at the outlet of a shroud (12) of an electrostatic sprayer. Although not necessarily used for engaging vegetation, the tines of Coffee would prove to be obvious to one having ordinary skill in the art at the time the invention was made as a plausible addition to the invention of Paranjpe et al for any and all intended use.

18. Claims 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,843,210 to Paranjpe et al in view of U.S. Patent No. 5,064,123 to Aiello et al.

The rejection of claim 6 above serves as the basis for the following. As per claims 23-25, Paranjpe et al fails to teach any form of a device to transport the sprayer, specifically a wheel, nor a pivoting head. Aiello et al teaches (See Figure 1) a mobile electrostatic sprayer featuring at least one wheel (22, 24, and 26), thus controlling the distance from the nozzle to any sprayable target. Aiello et al teaches a pray head (112) configured (via flexible barrel (110) to rotate about one or more axes. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the spray head of Paranjpe et al with the wheels and pivoting head of Aiello et al, since it has been held that making an old device portable or movable without producing any new and expected results involves only routine skill in the art and engineering logic

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES S. HOGAN whose telephone number is (571)272-4902. The examiner can normally be reached on Mon-Fri, 7:30a-4:00p EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on (571)272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. S. H./
Examiner, Art Unit 3752
10/07/10
/Len Tran/
Supervisory Patent Examiner, Art Unit 3752